

# ABSTRACT

Four glycoproteins of apparent molecular weights 300,000, 140,000, 125,000, and 36,000 (gp300, gp140, gp125, and gp36) are detectable in human immunodeficiency virus type 2 (HIV-2) infected cells. The gp125 and gp36 are the external and transmembrane components, respectively, of the envelope glycoproteins of HIV-2 mature virions. The gp300, which is a dimeric form of gp140, the precursor of HIV-2 envelope glycoprotein, is probably formed by a pH dependent fusion in the endoplasmic reticulum. Such a doublet is also observed in cells infected with simian immunodeficiency virus (SIV), a virus closely related to HIV-2. On the other hand, the envelope glycoprotein precursor of HIV-1 does not form a dimer during its processing. Experiments carried out with various inhibitors of oligosaccharide trimming enzymes suggest that transient dimerization of the glycoprotein precursor is required for its efficient transport to the Golgi apparatus and for its processing. The gp300 is useful for detecting antibodies to HIV-2 antigens in human body fluids and for raising antibodies to gp300.

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